loaded with starch, and bears modified leaves, the whole forming a hook-like structure which lies dormant until the next spring, when it again comes to the surface and resumes the usual development. The peculiarity is being acquired, for some plants growing under special conditions show it but feebly.

W. F. GANONG: *The phytoecology of the Bay of Fundy salt marshes.*

The great salt marshes at the head of the Bay of Fundy offer some features differentiating them both physically and in their vegetation from other known salt marshes. The processes of reclaiming them allow many stages in the succession of plants to be seen, and this paper described the vegetation and its peculiar features from the dynamical point of view.

H. J. WEBBER: *Complications in Citrus hybridization caused by polyembryony.*

The author pointed out, and illustrated by photographs, the fact that in polyembryonic Citrus seeds, which are result of hybridization, only one of the embryos shows any trace of characters of the pollen parent while all others are like the ovule parent. Doubtless the true hybrid is derived from the fertilized egg-cell, and all the others from adventive embryos produced by nucellar tissue. The fact has a practical bearing for Citrus hybridizers in that it will be necessary to raise many embryos into seedlings before the hybrid can be found.

W. F. GANONG,
Secretary.

CERASTIUM ARVENSE OBLONGIFOLIUM.

IN 1887 Hollick and Britton, in a paper on "*Cerastium arvense L.* and its North American varieties,"[1] remarked that the variety *oblongifolium*, as it occurs from southern New York to Maryland, "is apparently confined to magnesian rocks," such as areas of serpentine and magnesian limestone, citing several localities in proof of it. They were not so confident about it in other places, though mentioning one from which the original of Torrey's *C. oblongifolium* came, "a region of magnesian limestone near Sandusky, Ohio." Having in May last found this variety — or perhaps one which agrees more closely with the variety *maximum* of Hollick and Britton — on a limestone ledge near Lockport,

[1] Bull. Torr. Bot. Club 14: 45. 1887.

Ill., I was curious to ascertain whether this peculiarity was true for this locality, being aware that many beds of the Niagara limestone on which the plants were growing are magnesian, and have been used in the manufacture of hydraulic cement, the carbonate of magnesia sometimes exceeding 40 per cent. Consulting the Geological Survey of Illinois,[2] it was found that Frank H. Bradley, the writer of the chapter on the geology of Will county, in which the ledge is situated, describes the building stones of Joliet and Lockport as "a fine grained, clinking, magnesian limestone." There can therefore be little question about the preference of the plant in this locality.

I have met with the variety *oblongifolium* but once before, having collected it in 1873 near Kankakee, Ill., where the same limestones occur. Outcrops of rock were frequent along the road by the side of which the plants grew, though the memorandum with the specimens does not say they were taken from the rocks. They were also from a locality where the beds, according to Professor Bradley, "apparently correspond with those quarried at Joliet."[3] The plants may safely be said to show their preference here also.

It was intimated above that the specimens at Lockport closely resembled the var. *maximum* Holl. & Britton, though this variety is assigned to California only. The stems are tall for the species, being 3–4.5^{dm} high, ascending to nearly erect from a short decumbent base. The leaves are lanceolate to lance-oblong, 3–5^{cm} long by 5–12^{mm} wide, acute or acutish, as long and wide as those figured in *pl. 64, fig. 2*, of Hollick and Britton's article, but not quite so lanceolate, tapering from the middle rather more than from the base. The large white flowers have petals 10–12^{mm} long; the ripened capsule is about 15^{mm} long, half or slightly more than half covered by the calyx. The plants are much more like *fig. 2* of this plate than *pl. 63*, which shows the variety *oblongifolium*. Robinson[4] remarks on the var. *maximum* "Similar robust forms of *C. arvense* have been found on the St. Clair river, Wis. (Houghton); and N. Illinois at Joliet (Boott) and Dixon (Vasey)." As the locality near Lockport is but six miles from Joliet, the forms may be identical in both places. If deemed the variety *oblongifolium*, it is not easy to distinguish the Lockport plants from those figured as the variety *maximum*.—E. J. HILL, *Chicago*.

[2] Rep. Ill. Geol. Surv. 4: 220. 1870.

[3] Rep. Ill. Geol. Surv. 4: 233. 1870.

[4] Synoptical Flora of N. America, 1[1]: 231. 1897.